FINAL 12/04

STATEMENT OF WORK FOR THE REMEDIAL DESIGN AND REMEDIAL ACTION AT 12th STREET LANDFILL, KALAMAZOO RIVER SUPERFUND SITE OPERABLE UNIT #04 PLAINWELL, MICHIGAN

I. PURPOSE

The purpose of this Statement of Work (SOW) is to set forth requirements for implementation of the remedial action set forth in the Record of Decision (ROD) for Operable Unit #04, which was signed by the Director of the Michigan Department of Environmental Quality and concurred with by the U.S. EPA Region V on September 28, 2001, for the 12th Street Landfill, OU#4 of the Allied Paper/Portage Creek/Kalamazoo River Superfund Site (Site). Weyerhaeuser shall follow the ROD, the Consent Decree, this SOW, the approved Remedial Design Work Plan, the approved Remedial Action Work Plan, U.S. EPA Superfund Remedial Design and Remedial Action Guidance and any additional guidance provided by U.S. EPA in submitting deliverables for designing and implementing the remedial action for OU-4.

II. DESCRIPTION OF THE REMEDIAL ACTION/PERFORMANCE STANDARDS

Weyerhaeuser shall design and implement the Remedial Action to meet the performance standards and specifications set forth in the ROD and this SOW. Performance standards shall include cleanup standards, standards of control, quality criteria and other substantive requirements, criteria or limitations including all Applicable or Relevant and Appropriate Requirements (ARARs) set forth in the ROD, SOW and/or Consent Decree.

The areas that comprise the Operable Unit #04 that will be addressed by this SOW are listed below:

- The landfill itself, which primarily contains PCB-contaminated paper residuals (residuals), and from which PCB contamination has migrated into the surrounding areas.
- Groundwater contamination and PCB-contaminated landfill leachate.
- The woodland located immediately south/southeast of the landfill.
- Wetlands, as identified by National Wetland Inventory maps, that border the landfill to the north and northwest.
- A portion of the adjacent gravel operation property (adjacent property) that borders the landfill to the west.
- A portion of the former powerhouse discharge channel of the Plainwell Dam on the Kalamazoo River, which contains residuals that have eroded from the east side of the landfill.

1. Excavation

Weyerhaeuser shall determine the horizontal and vertical extent of the PCB contamination based on field reconnaissance and/or sample analyses prior to any excavation or dredging in the woodland, wetlands, adjacent property, or the former powerhouse discharge channel. Pursuant to U.S. EPA approval, Weyerhaeuser may rely on existing site data in determining the extent of contamination. The excavation

along the east side of the landfill (along the former powerhouse discharge channel and the river) shall be extensive enough to create an adequate buffer zone to ensure that, for the lifetime of the remedy, there is no direct contact between the PCB-contaminated wastes within the newly constructed landfill containment system and the Kalamazoo River/former powerhouse discharge channel. This buffer zone shall be of sufficient size to allow for the installation of and access to groundwater monitoring wells. The extent of the excavation shall be identified primarily by visual criteria and the excavated material shall be relocated further into the landfill.

Weyerhaeuser shall submit a Remedial Action (RA) Work Plan to U.S. EPA for review and approval prior to initiating any excavation activity. The RA Work Plan shall be based on the approved Final Design and shall include air and surface water monitoring provisions as determined necessary by U.S. EPA. Subsequent to work plan approval, all excavated material will be dewatered as necessary and disposed of in the landfill prior to construction of the cover and containment system.

Upon completion, Weyerhaeuser shall re-establish vegetation and surface elevations unless otherwise approved by U.S. EPA. Soil erosion shall be controlled compliant with state law during remedy implementation. Restoration of the wetlands pursuant to Part 303, Wetlands Protection, of the NREPA, shall also be carried out.

2. Cap

Weyerhaeuser shall install a cap on the landfill portion of the 12th St.-OU4 in compliance with the relevant requirements of Part 115, Solid Waste Management, of the NREPA concerning cap specifications for closure of a solid waste disposal facility. The construction of the cap over the landfill will minimize infiltration of precipitation through the landfill and migration of PCBs from the landfill into the groundwater, woodland, wetlands, adjacent property, and the former powerhouse discharge channel, and eliminate direct contact hazards. The cap consists of the following components from bottom to top.

- A layer of select granular fill at least six inches thick, from an off-site source, having a minimum hydraulic conductivity of 1×10^{-3} centimeters per second, shall be placed on top of the landfill as a suitable sub-grade for the cap. The need for a gas venting system will be evaluated during the RD process. If it is determined that a gas venting system is needed, based upon the data from the RD process or other site information, this layer will be modified as approved by U.S. EPA to also act as a gas venting layer. If so modified, this gas venting layer shall be designed to collect landfill gas (methane) and route it to a passive venting system. If it is determined that a gas venting system is required, it shall be monitored pursuant to an approved monitoring plan to determine whether emissions may cause potential health effects. If potential health effects are indicated, Weyerhaeuser shall take appropriate action, as approved by U.S. EPA, to address these issues. Appropriate action may include installation, operation, and maintenance of an air emission treatment system.

- A polyvinyl chloride (PVC) geomembrane liner at least 30 mils thick, or its equivalent, will be placed over the select granular fill.

- A general fill (protective) layer at least 24 inches thick will be placed above the 30-mil PVC, geomembrane liner. The protective layer will be capable of sustaining the growth of non-woody plants, and shall have adequate water holding capacity. The water that accumulates within this layer will drain to a ditch or sedimentation outlet structure and discharge to the Kalamazoo River.

- A vegetative (erosion) layer at least six-inches thick will be placed over the protective layer. The vegetative layer will be designed to promote vegetative growth, provide surface water runoff, and minimize erosion. The feasibility of using vegetation that would provide habitat, such as native grasses, will be addressed in the RD.

3. Erosion Protection and Containment System

Weyerhaeuser shall install erosion protection on the newly constructed side walls of the landfill. This protection shall be sufficient to protect the side walls from a 500-year flood event. The erosion protection shall extend, at a minimum, to an elevation of 707.0 feet above mean sea level (MSL), which is approximately two feet above the 100-year flood elevation. Placement of erosion and flood protection on the side walls of the landfill shall be consistent with the relevant requirements of Part 115, Solid Waste Management, Part 301, Inland Lakes and Streams, Part 91, Soil Erosion and Sedimentation Control, and Part 303, Wetlands Protection, of the NREPA.

Weyerhaeuser shall construct a containment system around the outside of the landfill. The containment system shall be designed to prevent release of PCB contaminated soils, residuals, or leachate. The containment system shall provide appropriate slope stability and flood and erosion protection. The containment system shall be designed, at a minimum, to meet the relevant provisions of Michigan Solid Waste Landfill closure regulations pursuant to Part 115, Solid Waste Management, of the NREPA. The containment system must be approved prior to construction.

4. Short-Term and Long-Term Monitoring

Weyerhaeuser shall perform short-term surface water monitoring during all construction and excavation activities that may have an impact on surface water. Surface water monitoring shall be conducted in order to assure that public health, safety, welfare, and the environment are being protected in accordance with state and federal law during implementation of excavation activities.

During construction activities, Weyerhaeuser shall perform air monitoring, as necessary. Air monitoring will ensure that the RA activities do not violate the rules prohibiting the emission of air contaminants in quantities which have injurious effects on human health, animal life, plant life of significant economic value, and/or property as established in Part 55, Air Pollution Control, of the NREPA.

Weyerhaeuser shall perform long-term groundwater monitoring following construction of the remedy. The long-term groundwater monitoring may require the installation of additional monitoring wells or abandonment of existing wells that are no longer necessary. The number and location of ground water monitoring wells shall be specified by Weyerhaeuser in the Remedial Design and is subject to U.S. EPA approval, in consultation with the State. Monitoring of the groundwater aquifer shall be conducted in accordance with Part 201, Environmental Remediation, of the NREPA.

The groundwater from each monitoring well shall be sampled and analyzed by Weyerhaeuser as described below, unless modified in the approved Final O&M Plan:

Semi-annual Monitoring: Laboratory analysis performed shall include PCBs, dioxins, U.S. EPA's Target Analyte List (TAL) inorganics, U.S. EPA'S Target Compound List (TCL) organics, measurement of groundwater and surface water levels, as well as the field parameters turbidity, temperature, pH and conductivity.

Quarterly Monitoring: A smaller list of indicator parameters shall be sampled on a quarterly basis. The indicator parameters to be analyzed shall be specified in the Remedial Design and shall at a minimum include PCBs, measurement of groundwater and surface water levels, as well as the field parameters turbidity, temperature, pH and conductivity.

After at least two years of sampling under the Semi-Annual Monitoring and Quarterly Monitoring programs, Weyerhaeuser may petition to discontinue the Quarterly Monitoring program and sample only on a semi-annual sampling frequency. Weyerhaeuser may at that time also petition to limit the number of parameters included in

the Semi-Annual Monitoring program. After at least two years of sampling on only a semi-annual basis, Weyerhaeuser may petition U.S. EPA to switch to only performing the monitoring on an annual basis if there has been no significant change in sampling results, or site conditions between sampling events. After at least five (5) years of sampling on an annual basis only, Weyerhaeuser may petition U.S. EPA to switch to a sampling frequency of once every five (5) years if there has been no significant change in sampling results between sampling events. The samples collected on a five year basis shall be analyzed for the parameters specified in the original Semi-Annual Monitoring program. Each petition under this task is subject to U.S. EPA review and written approval. U.S. EPA reserves the right to require Weyerhaeuser to sample on a more frequent basis, and/or for additional parameters, based upon data indicating a significant change in sampling results between sampling events.

The continued need for groundwater monitoring will be evaluated at the five-year review required under the NCP, and at each review thereafter, but shall continue until the U.S. EPA, in consultation with the support agency, determines that such monitoring is no longer necessary.

5. Leachate Collection

During RD, Weyerhaeuser shall evaluate the need for either an interim or long-term leachate collection system. The evaluation, at a minimum, shall consider the water content of the waste, the presence and quantity of perched water within the landfill, the potential for and effect of waste settlement and the practicability of extracting water from the residuals matrix.

If, based upon the data, U.S. EPA determines that a leachate collection is necessary, Weyerhaeuser shall install and operate a leachate collection system to ensure that the public health, safety and welfare, and the environment are adequately protected.

6. Fencing and Permanent Marker(s)

Weyerhaeuser shall install fencing around the entire landfill portion of the 12th St.-OU4. Weyerhaeuser shall place permanent marker(s) around the boundary of the landfill describing the restricted area of the 12th St.-OU4 and the nature of any restrictions. Warning signs will also be posted on the fence every 200 feet and on all entry gates. The number, content, and location of the permanent markers and warning signs shall be approved by the U.S. EPA.

7. Deed Restrictions

Weyerhaeuser shall rely upon the existing Restrictive Covenant (MDEQ Reference No.: RC-RRD-03-052 on USEPA Site No.: 059B) permanently filed for the property on April 23, 2004, to regulate future use of the landfill to protect public health, safety and welfare, and the environment; provided that if any deed restrictions are necessary on adjacent properties, Weyerhaeuser shall attempt to obtain such deed restrictions in accordance with Section XI of the Consent Decree.

8. Long-term Maintenance

Weyerhaeuser shall perform the long-term maintenance and post-closure care as required by Part 201, Environmental Remediation, of the NREPA, which shall be provided as part of this RA. A detailed O&M Plan shall be submitted as part of this RD. Once approved, long-term O&M shall be carried out pursuant to the plan.

9. Other Provisions

Measures will be taken during remedy construction activities to minimize the noise and dust impacts of

construction upon the surrounding community. Fugitive dust emissions will be monitored and controlled in a manner to ensure that they comply with the standards contained in Part 55, Air Pollution Control, of the NREPA.

III. SCOPE OF REMEDIAL DESIGN AND REMEDIAL ACTION

The Remedial Design/Remedial Action shall consist of six tasks. All plans are subject to EPA approval.

Task 1: Remedial Design Work Plan

Weyerhaeuser shall submit a Work Plan which shall document the overall management strategy for performing the design, construction, operation, maintenance and monitoring of Remedial Actions for U.S. EPA review and approval. The plan shall document the responsibility and authority of all organizations and key personnel involved with the implementation and shall include a description of qualifications of key personnel directing the Remedial Design, including contractor personnel. The Work Plan shall also contain a schedule of Remedial Design activities. Weyerhaeuser shall submit a Remedial Design Work Plan in accordance with Section IX and paragraph 28 of the Consent Decree.

The RD Work Plan shall include a project schedule for each major activity and submission of deliverables generated during the Remedial Design. This RD Work Plan shall include, at a minimum, a pre-design QAPP, Health and Safety Plan, and a Field Sampling Plan.

Weyerhaeuser shall implement the pre-design work in accordance with the final RD Work Plan. The results of the pre-design studies shall be included with the Preliminary Design.

Task 2: Remedial Design Phases

Weyerhaeuser shall prepare construction plans and specifications to implement the Remedial Actions at the Operable Unit #4 as described in the ROD and this SOW. Plans and specifications shall be submitted in accordance with the schedule set forth in Section V below. Subject to approval by U.S. EPA, Weyerhaeuser may submit more than one set of design submittals reflecting different components of the Remedial Action. All plans and specifications shall be developed in accordance with U.S. EPA's Superfund Remedial Design and Remedial Action Guidance (OSWER Directive No. 9355.0-4A) and shall demonstrate that the Remedial Action shall meet all objectives of the ROD , the CD and this SOW, including all Performance Standards. EPA's Project Coordinator and Weyerhaeuser's Project Coordinator will meet in person or via conference call, at a minimum, on a bi-monthly basis, unless EPA's Project Coordinator and Weyerhaeuser's Project Coordinator mutually agree to meet on a greater or less frequent basis.

A. Preliminary Design

Weyerhaeuser shall submit the Preliminary Design when the design effort is approximately 30% complete. If required by the approved RD Work Plan, the Preliminary Design submittal shall include or discuss, at a minimum, the following:

- design criteria;
- results of treatability studies;
- results of additional field sampling and pre-design work;
- project delivery strategy;
- preliminary plans, drawings and sketches;
- required specifications in outline form;
- preliminary construction schedule;
- proposed cleanup verification methods, including compliance with Applicable or Relevant and Appropriate Requirements (ARARs);

- proposed siting/locations or processes/construction activities;
- real estate, easement, restrictive covenant, and permit requirements; and,
- QAPP/Health and Safety Plan/Field Sampling Plan/Contingency Plan.

B. Intermediate Design

The Intermediate Design, if required by EPA or if independently submitted by Weyerhaeuser, shall be a continuation and expansion of the preliminary design. Any value engineering proposals must be identified and evaluated during this review.

C. Prefinal and Final Designs

Weyerhaeuser shall submit the Prefinal Design when the design effort is 95% complete and shall submit the Final Design when the design effort is 100% complete. The Prefinal Design shall fully address all U.S. EPA comments made to the preceding design submittal. The Final Design shall fully address all of U.S. EPA comments made to the Prefinal Design and shall include reproducible drawings and specifications suitable for bid advertisement.

The Prefinal Design shall serve as the Final Design if U.S. EPA has no further comments and issues the notice to proceed.

Unless otherwise directed by EPA in the approved RD Work Plan, the Prefinal and Final Design submittals shall include, at a minimum, those elements listed for the Preliminary Design, as well as the following:

- final plans and specifications;
- Draft OU4 Operation and Maintenance Plan;
- Construction Quality Assurance Project Plan ("CQAPP"). The CQAPP, which shall detail the approach to quality assurance during construction activities at OU4, shall also specify a quality assurance official ("QA Official") to conduct a quality assurance program during the construction phase of the project;
- Contingency Plan, and;
- Performance Standards Verification Plan. The PSVP shall explain in detail which mechanisms will ensure that the RA achieves the overall Remedial Action Objectives ("RAOs") developed and defined in the ROD, including those RAOs that are not based upon concentration levels of hazardous substances. The PSVP shall include provisions for confirmation sampling as needed.

Task 3: Remedial Action Work Plan

Weyerhaeuser shall submit a Remedial Action Work Plan which includes a detailed description of the remediation and construction activities. The RA Work Plan shall list the major deliverables and include a project schedule for each major activity and submission of deliverables generated during the Remedial Action. Weyerhaeuser shall submit a Remedial Action Work Plan in accordance with Section IX, paragraph 29 of the Consent Decree and Section V of this SOW.

Task 4: Remedial Action Construction

Weyerhaeuser shall implement the Remedial Action as detailed in the approved Final Design. The following activities shall be completed in constructing the Remedial Action.

A. Pre-construction inspection and meeting:

Unless not required by U.S. EPA, Weyerhaeuser shall participate with the U.S. EPA and the State in a preconstruction inspection and meeting to:

a. Review methods for documenting and reporting inspection data;

b. Review methods for distributing and storing documents and reports;

c. Review work area security and safety protocol;

d. Discuss any appropriate modifications of the construction quality assurance plan to ensure that site-specific considerations are addressed; and,

e. Conduct an OU-4 walk-around to verify that the design criteria, plans, and specifications are understood and to review material and equipment storage locations.

The pre-construction inspection and meeting shall be documented by a designated person and minutes shall be transmitted to all parties.

B. Final Construction Completion Inspection:

As approved by U.S. EPA in the RA construction schedule included in the RA Work Plan, after Weyerhaeuser makes a preliminary determination that OU4 construction is complete (i.e., all remedial action construction activity is complete and long-term O&M and post closure care is ready to commence), Weyerhaeuser shall notify the U.S. EPA and the State for the purposes of conducting a prefinal construction completion inspection. The prefinal construction completion inspection shall consist of a walk-through inspection of the entire Operable Unit #04 with U.S. EPA. The inspection is to determine whether the construction is complete and consistent with the contract documents. Any outstanding construction items discovered during the inspection shall be identified and noted in a Prefinal Inspection Report, which shall be delivered to U.S. EPA within 15 days of the prefinal RA construction inspection. This report shall summarize the prefinal construction completion activities, outline the outstanding items, actions required to resolve the items, completion date for the items, and an anticipated date for the final inspection.

Within 30 days of U.S. EPA's approval of the Prefinal Inspection Report, Weyerhaeuser shall initiate any construction activity or other work identified in that document as required to be completed. Within 90 days after completion of any work identified in the Prefinal Inspection Report, Weyerhaeuser shall notify the U.S. EPA and the State for the purposes of conducting a final construction completion inspection. The final inspection shall consist of a walk-through inspection of Operable Unit #04 by U.S. EPA and Weyerhaeuser. The Prefinal Inspection Report shall be used as a checklist with the final inspection focusing on the outstanding construction items identified in the Prefinal Inspection Report. Confirmation shall be made that outstanding items have been resolved. If any items are unresolved, the inspection shall be considered to be a Prefinal Construction Inspection requiring another Prefinal Construction Completion Inspection Report and subsequent Final Construction Completion Inspection. Subsequent to a successful final construction completion inspection and within the time period set forth in the approved RA Work Plan, Weyerhaeuser shall submit a Certification of Completion of Construction Report, which shall contain a certification by a professional engineer that the construction has been completed consistent with the contract documents and the Remedial Action. Thereafter, and in accordance with the schedule in the approved RA Work Plan, U.S. EPA will issue a Certification of Completion of Construction for purposes of disbursement under Paragraph 3.c. of Appendix G of the Consent Decree

C. Pre-certification of OU-4 Remedial Action Inspection:

In accordance with Paragraph 65 of the Consent Decree, within 90 days after Weyerhaeuser concludes that all phases of the Remedial Action (excluding OU4 O&M), have been fully performed and the OU4 Performance Standards (as defined in the approved RA and Performance Standard Verification Plan) have been attained, Weyerhaeuser shall schedule and conduct a pre-certification inspection of the OU4

Remedial Action to be attended by Weyerhaeuser, EPA and MDEQ. If, after the pre-certification inspection, Weyerhaeuser still believes that the OU4 Remedial Action has been fully performed and the applicable OU4 Performance Standards have been attained, Weyerhaeuser shall submit a Certification of Completion of the OU4 RA Report, requesting certification to EPA for approval, with a copy to MDEQ, pursuant to Section XIII of the Consent Decree within 30 days of the inspection. In the report a professional engineer and Weyerhaeuser's Project Coordinator shall state the construction of the OU4 Remedial Action has been completed in full satisfaction of the requirements of the Consent Decree. The written report shall include a certification statement and signatures identified in Paragraph 65a of the CD and described in Section E paragraph 3 of this SOW below. Subsequent requests for certifications, inspections, and reports shall also be in accordance with the terms of Paragraph 65 of the Consent Decree.

D. Completion of OU-4 Work

In accordance with Paragraph 66 of the Consent Decree, within 90 days after Weyerhaeuser concludes that all phases of the OU4 Work (including OU4 O&M), have been fully performed, Weyerhaeuser shall schedule and conduct pre-certification inspection of OU4 Work pursuant to Section XVI, Paragraph 66a of the Consent Decree, to be attended by Weyerhaeuser, EPA, and MDEQ. If, after the pre-certification inspection, Weyerhaeuser still believes that the OU4 Work has been fully performed, Weyerhaeuser shall submit a written report (Completion of Work Report) by a registered professional engineer stating that the OU4 Work has been completed in full satisfaction of the requirements of the Consent Decree. The written report shall contain the certification statement and signatures identified in Paragraph 66a of the CD and described in Section E, Paragraph 4 of this SOW. If, after review of the written report, EPA, after reasonable opportunity to review and comment by MDEQ, determines any portion of th OU4 Work has not been completed in accordance with the Consent Decree, EPA will notify Weyerhaeuser in writing of the activities that must be undertaken by Weyerhaeuser pursuant to the Consent Decree to complete the OU4 Work, provided, however, that EPA may only require Weyerhaeuser to perform such activities pursuant to Paragraph 66a of the Consent Decree to the extent that such activities are consistent with the scope of the remedy selected in the OU4 ROD. EPA will set forth in the notice a schedule for performance of such activities consistent with the Consent Decree and the OU4 SOW or require Weyerhaeuser to submit a schedule to EPA for approval pursuant to Section XIII of the Consent Decree. Weyerhaeuser shall perform all activities described in the notice in accordance with the specifications and schedules therein, subject to its right to invoke the dispute resolution procedures set forth in Section XXII of the Consent Decree.

If EPA concludes, based on the initial or any subsequent request for Certification of Completion of OU4 Work by Weyerhaeuser and after a reasonable opportunity for review and comment by MDEQ, that the OU4 Work has been performed in accordance with the Consent Decree, EPA will so notify Weyerhaeuser in writing.

E. Reports

1. Progress Reports

As described in the Consent Decree, unless otherwise required on a less frequent basis by EPA, Weyerhaeuser shall submit to U.S. EPA monthly progress reports during construction and quarterly reports during other activities delineating the status of the Operable Unit #04. The progress reports shall include;

I. Activities conducted during the period and results of data collection activities,
II. Problems encountered during the period,
III. Schedule variances and corrective actions, if necessary
IV. Projected Activities for the next six to twelve week period.

2. Certification of Completion of Construction Report

Within the time frame provided in the approved RA Workplan, Weyerhaeuser shall submit a Certification of Completion of Construction Report. In the report, a registered professional engineer and Weyerhaeuser's Project Coordinator shall state that the Remedial Action has been constructed in accordance with the design and specifications. The report shall include the following items, as necessary:

- Brief description of how outstanding items noted in the Pre-final Construction Completion Inspection were resolved;
- Explanation of modifications made during the RA to the approved RD and RA Work Plans and why these changes were made;
- As-built drawings;
- Synopsis of the construction work defined in the SOW and certification that the construction work has been completed.

Within the time period provided in the approved RA Workplan and subsequent to EPA's approval of the Certification of Completion of Construction Report, EPA will issue to Weyerhaeuser a Certification of Completion of Construction for purposes of disbursement under Paragraph 3.c of Appendix G of the Consent Decree.

3. Certification of Completion of the OU4 RA Report

The Certification of Completion of the OU4 RA Report, provided for in Paragraph 65 of the CD, shall include the following items, as necessary:

- Synopsis of the work defined in the SOW and a demonstration in accordance with the Performance Standards Verification Plan and Performance Standards have been achieved;
- Certification that the Remedial Action has been completed in full satisfaction of the requirements of the Consent Decree, and;
- A description of how Weyerhaeuser will implement any remaining part of the EPA approved Operation and Maintenance Plan.

The written report shall identify any performance standards that have not been met as of the date of the report, and shall include as-built drawings signed and stamped by a professional engineer. The report shall contain the following statement, signed by a responsible corporate official of Weyerhaeuser or Weyerhaeuser's Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

4. Completion of Work Report

In the Certification of Completion of OU4 Work Report, provided for in Paragraph 66 of the Consent Decree a registered professional engineer and Weyerhaeuser's Project Coordinator shall state the OU4 Work has been completed in full satisfaction of the requirements of the Consent Decree. The written report shall contain the following statement, signed by a responsible corporate official of Weyerhaeuser or Weyerhaeuser's Project Coordinator:

"To the best of my knowledge, after thorough investigation, I certify that the information contained in or accompanying this submission is true, accurate and complete. I am aware there are

significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Task 5: Operation and Maintenance

Weyerhaeuser shall prepare an Operation and Maintenance (O&M) Plan to cover both implementation and long term maintenance of the Remedial Action. An initial Draft O&M Plan shall be submitted as a final Design Document submission. The Final O&M Plan shall be submitted to U.S. EPA in accordance with the construction schedule contained in the approved RA Workplan. The plan shall comprise the following elements as may be applicable to OU#4:

1. Description of normal maintenance:

    a. Description of tasks for operation:
    b Description of tasks.for maintenance;
    c. Description of prescribed treatment or operation conditions; and
    d. Schedule showing frequency of each O&M task.

2. Description of potential operating problems:

    a. Description and analysis of potential operation problems:
    b. Sources of information regarding problems; and
    c. Common and/or anticipated remedies.

3. Description of routine monitoring and laboratory testing:

    a. Description of monitoring tasks:
    b. Description of required data collection, laboratory tests and their interpretation;
    c. Required quality assurance, and quality control ;
    d. Schedule of monitoring frequency and procedures for a petition to U.S. EPA to reduce the frequency of maintenance or to discontinue it; and
    e. Description of verification sampling procedures if Cleanup or Performance Standards are exceeded in routine monitoring.

4. Description of alternate O&M:

    a. Should systems fail, alternate procedures to prevent release or threatened releases of hazardous substances, pollutants or contaminants which may endanger public health and the environment or exceed performance standards; and

    b. Analysis of vulnerability and additional resource requirement should a failure occur.

5. Corrective Action:

    a. Description of corrective action to be implemented in the event that cleanup or performance standards are exceeded: and

    b. Schedule for implementing these corrective actions.

6. Safety plan:

    a. Description of precautions, of necessary equipment, etc., for Operable Unit #04 personnel; and
    b. Safety tasks required in event of systems failure.

7. Description of equipment:

   a. Equipment identification:
   b. Installation of monitoring components;
   c. Maintenance of Operable Unit #04 equipment; and
   d. Replacement schedule for equipment and installed components.

8. Records and reporting mechanisms required:

   a. Daily operating logs:
   b. Laboratory records;
   c. Records for operating costs;
   d. Mechanism for reporting emergencies;
   e. Personnel and maintenance records; and
   f. Monthly/annual reports to State agencies.

Task 6: Performance Monitoring

Performance monitoring shall be conducted to ensure that all Performance Standards are met.

A. Performance Standard Verification Plan

The purpose of the Performance Standard Verification Plan is to provide a mechanism to ensure that both short-term and long-term Performance Standards for the Remedial Action are met. The Draft Performance Standards Verification Plan shall be submitted with the Prefinal Design. Once approved, the Performance Standards Verification Plan shall be implemented on the approved schedule. The Performance Standards Verification Plan shall include:

1. Quality Assurance Project Plan
2. Health and Safety Plan
3. Field Sampling Plan
4. Specification of those tasks to be performed by Weyerhaeuser to demonstrate compliance with the Performance Standards and a schedule for the performance of these tasks.

IV CONTENT OF SUPPORTING PLANS

The documents listed in this section, the Quality Assurance Project Plan, the Field Sampling Plan, the Health and Safety Plan, the Contingency Plan and the Construction Quality Assurance Plan are documents which must be prepared and submitted as outlined in Section III of this SOW. The following section describes the required contents of each of these supporting plans.

A. Quality Assurance Project Plan

Weyerhaeuser shall develop an Operable Unit #04 specific Quality Assurance Project Plan (QAPP), covering sample analysis and data handling for samples collected in all phases of the required Work, based upon the Consent Decree and guidance provided by U.S. EPA. The QAPP shall be consistent with the requirements of the EPA Contract Lab Program (CLP) for laboratories proposed outside the CLP. The QAPP shall at a minimum include:

Project Description
* Operable Unit #04 History
* Past Data Collection Activity
* Project Scope

* Sample Network Design
* Parameters to be Tested and Frequency
* Project Schedule

Project Organization and Responsibility

Quality Assurance Objective for Measurement Data
* Level of Quality Control Effort
* Accuracy, Precision and Sensitivity of Analysis
* Completeness, Representativeness and Comparability

Sampling Procedures

Sample Custody
* Field Specific Custody Procedures
* Laboratory Chain of Custody Procedures

Calibration Procedures and Frequency
* Field Instruments/Equipment
* Laboratory Instruments

Analytical Procedures
* Non-Contract Laboratory Program Analytical Methods
* Field Screening and Analytical Protocol
* Laboratory Procedures

Internal Quality Control Checks
* Field Measurements
* Laboratory Analysis

Data Reduction, Validation, and Reporting
* Data Reduction
* Data Validation
* Data Reporting

Performance and System Audits
* Internal Audits of Field Activity
* Internal Laboratory Audit
* External Field Audit
* External Laboratory Audit

Preventive Maintenance
* Routine Preventative Maintenance Procedures and Schedules
* Field Instruments/Equipment
* Laboratory Instruments

Specific Routine Procedures to Assess Data Precision, Accuracy, and Completeness
* Field Measurement Data
* Laboratory Data

Corrective Action
* Sample Collection/Field Measurement
* Laboratory Analysis

Quality Assurance Reports to Management

Weyerhaeuser shall submit the draft QAPP to U.S. EPA for review and approval. The QAPP shall be designed to address all phases of the project from pre-design to confirmatory sampling. If, because of the logistics of the project, the initial QAPP, developed as part of the RD Work Plan, does not lend itself to addressing all phases of the project, the QAPP shall be modified to incorporate any appropriate changes.

B. Health and Safety Plan

Weyerhaeuser shall develop a Health and Safety Plan which is designed to protect on-site personnel and area residents from physical, chemical and all other hazards posed by this remedial action. The Plan shall develop the performance levels and criteria necessary to address the following areas.

Description of Operable Unit #04
Personnel
Levels of protection
Safe work practices and safe guards
Medical surveillance
Personal and environmental air monitoring
Personal protective equipment
Personal hygiene
Decontamination - personal and equipment
Operable Unit #04 work zones
Contaminant control
Contingency and emergency planning
Logs, reports and record keeping

The safety plan shall follow U.S. EPA guidance and all OSHA requirements as outlined in 29 CFR 1910 and 1926. As part of the Health and Safety Plan, Weyerhaeuser shall include a Contingency Plan describing procedures to be used in the event of an accident or emergency at the site. The Contingency Plan shall include, at a minimum, the following:

1. Name of the person or entity responsible for responding in the event of an emergency incident.

2. Plan and date(s) for meeting(s) with the local community, including local, State and Federal agencies involved in the cleanup, as well as local emergency squads and hospitals.

3. First aid medical information.

4. Air Monitoring Plan (if applicable).

5. Spill Prevention, Control, and Countermeasures (SPCC) Plan (if applicable), as specified in 40 CFR Part 109 describing measures to prevent and contingency plans for potential spills and discharges from materials handling and transportation.

C. Field Sampling Plan

Weyerhaeuser shall develop a Field Sampling Plan (as described in " Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA," October 1988). The Field Sampling Plan should supplement the QAPP and address all sample collection activities.

D. Construction Quality Assurance Plan

Weyerhaeuser shall submit a Construction Quality Assurance Plan (CQAP) which describes the Operable Unit #04 specific components of the quality assurance program which shall ensure that the completed project meets or exceeds all design criteria, plans, and specifications. The draft CQAP shall be submitted with the preliminary design and the final CQAP shall be submitted with the final design. The CQAP shall contain, at a minimum, the following elements:

1. Responsibilities and authorities of all organizations and key personnel involved in the design and construction of the Remedial Action.

2. Qualifications of the Quality Assurance Official to demonstrate he possesses the training and experience necessary to fulfill his identified responsibilities.

3. Protocols for sampling and testing used to monitor construction.

4. Identification of proposed quality assurance sampling activities including the sample size, locations, frequency of testing, acceptance and rejection data sheets, problem identification and corrective measures reports, evaluation reports, acceptance reports, and final documentation. A description of the provisions for final storage of all records consistent with the requirements of the Consent Decree shall be included.

5. Reporting requirements for CQA activities shall be described in detail in the CQA plan. This shall include such items as daily summary reports, inspection data sheets, problem identification and corrective measures reports, design acceptance reports, and final documentation. Provisions for the final storage of all records shall be presented in the CQA plan.

V. SUMMARY OF MAJOR DELIVERABLES/SCHEDULE

A summary of the project schedule and reporting requirements contained in this SOW is presented below:

Deliverable / Milestone	Due Date (calendar days)
RD Work Plan	Sixty (60) days after Notice of Authorization to proceed with RD
Progress Reports	As described in the CD
Preliminary Design (30%)	Ninety (90) days after Weyerhaeuser's receipt of all validated pre-design sample results, or a longer period of time as my be specified by EPA
Intermediate Design (60%) (if required or submitted)	Ninety (90) days after receipt of U.S. EPA's comments on the Preliminary Design, or a longer period of time as may be specified by EPA
Prefinal Design (95%)	If an Intermediate Design is required, or submitted, ninety (90) days after receipt of U.S. EPA comments on the Intermediate Design, or a longer period of time as may be specified by EPA If an Intermediate Design is not required or submitted one

	hundred eighty (180) days after receipt of U.S. EPA comments on the Preliminary Design, or a longer period of time as may be specified by EPA
Final Design (100%)	Thirty (30) days after receipt of U.S. EPA comments on the Prefinal Design, or a longer period of time as may be specified by EPA
RA Workplan	Thirty (30) days after U.S. EPA approval of Final Design
Award RA Contract(s)	As defined in the approved RA Work Plan
Pre-Construction Inspection	As defined in the approved final RA Work Plan
Initiate Construction of RA	Fifteen (15) days after Pre-Construction Inspection and meeting
Completion of Construction	As approved by U.S. EPA in RA construction schedule included in RA Work Plan
Final Construction Completion Inspection	As approved by U.S. EPA in RA construction schedule included in RA Work Plan
Weyerhaeuser submittal of Certification of Completion of Construction Report	As approved by U.S. EPA in RA construction schedule included in RA Work Plan
EPA issuance of Certification of Completion of Construction for purposes of disbursement under Paragraph 3.c. of Appendix G of the Consent Decree	As approved by U.S. EPA in RA construction schedule included in RA Work Plan
Pre-certification inspection of OU4 RA	Pursuant to Paragraph 65 of the Consent Decree
Certification of Completion of the OU4 RA Report	Pursuant to Paragraph 65 of the Consent Decree
Final O & M Plan	As defined in the RA Work Plan
Pre-certification inspection of OU4 Work	Pursuant to Paragraph 66 fo the Consent Decree
Certification of Completion of OU4 Work Report	Pursuant to Paragraph 66 of the Consent Decree